

REMARKS/ARGUMENTS

The Office Action mailed November 10, 2003, has been received and reviewed. Claims 1 through 89 are currently pending in the application. Claims 20 through 24, 31 through 41, 45 through 47, 66 through 72, and 87 through 89 were identified by the Examiner as being withdrawn from consideration as being drawn to non-elected invention(s). However, applicant respectfully submits that claims 67-72 were elected as part of Group II elected species in the Response to Election of Species Requirement received by the Patent Office on July 14, 2003. Reinstatement and consideration of claims 67-72 is respectfully requested.

Claims 1 through 19, 25 through 30, 42 through 44, 48 through 65, and 73 through 86 stand rejected. Claims 2 through 19, 25 through 30, 42 through 44, 49 through 65, and 73 through 86 have been amended to replace the term "said" with "the". Claims 1 and 48 have also been amended. Reconsideration is respectfully requested.

Objections to Specification

The specification stands objected to as failing to provide proper antecedent basis for the claimed subject matter. Paragraphs [0050] and [0058] have been amended to include material which was previously incorporated by reference. No new matter was added.

Applicant respectfully submits that paragraph [0001] of the specification of the present application specifically incorporates the content of Application Serial No. 08/906,578, now U.S. Patent 6,336,973 (the "'973 Patent") pursuant to MPEP §608.01(p). A copy of the '973 Patent is provided herewith. Paragraph [0050] of the current application has been amended to include ". . . the lead fingers 104 may be brought into close proximity to the adhesive reservoir 110 and additional adhesive material 114 may be delivered by a pump to the adhesive reservoir 110 to raise the level of the adhesive material 114 to contact the lead fingers 104, or to provide a moving wave or surge of adhesive material traveling across the reservoir 110." Support for the amendment to paragraph [0050] can be found, for example in the '973 Patent, col. 6, lines 3-12. As the contents of the '973 Patent were incorporated into the present application, applicant submits that the specification provides sufficient description and support for the claim language. Reconsideration and withdrawal of the rejection is requested.

It was further stated that the specification lacked description and support for the claim element “ultrasonic transmitter . . . ultrasonic sound wave” Applicant respectfully submits that paragraph [0001] of the current specification specifically incorporates the content of Application Serial No. 08/906,673, now U.S. Patent 6,013,535 (the “‘535 Patent”) pursuant to MPEP §608.01(p). A copy of the ‘535 Patent is provided herewith.

Paragraph [0058] was amended to include “the transmitter 140 and receiver 142 may be an ultrasonic transmitter and receiver. When an ultrasonic sound wave (not shown) from the transmitter 140 is altered by the exposed surface 122, the receiver 142 detects the change in transit time or phase shifts of the ultrasonic sound wave and generates the control signal 144.” Support for this amendment can be found, for example, in the ‘535 Patent, col. 7, lines 5-25. As the contents of the ‘535 Patent were incorporated into the present application, applicant submits that the specification provides sufficient description and support for the claim language. Reconsideration and withdrawal of the rejection is requested.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on U.S. Patent No. 5,185,040 to Sakai et al.

Claims 1 through 5, 7 through 11, 13 through 16, 43, 44, 48 through 52, 54 through 58, 60 through 62, 85, and 86 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sakai et al. (U.S. Patent No. 5,185,040). Applicant respectfully traverses this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Sakai et al. teaches a method and apparatus for forming strip-shaped electrodes 2 over the end of a plate-shaped electronic component 1. Sakai discloses an electrode paste reservoir 4 having a slotted plate 3 wherein electrode paste 2f is forced upwardly through slits 3a and introduced to **at least three surfaces** of an electronic component 1 having an end surface 1a and

major surfaces 1b and 1c which are in series with end surface 1a. (Sakai, FIG. 3). When end surface 1a and associated major surfaces, 1b and 1c, are introduced to electrode solder paste 2f, that has been forced through slits 3a, a U-shaped electrode is formed on end surface 1a and associated major, or side, surfaces 1b and 1c. (Sakai, FIG. 5).

By way of contrast with Sakai, claim 1 of the presently claimed invention recites a “method of applying viscous material to at least one semiconductor element, the method comprising: providing a receptacle including at least one viscous material pool containing viscous material having an exposed surface extending upwardly to a height therein, the at least one viscous material pool including at least one opening to provide access to at least the exposed surface of the viscous material; providing at least one stop proximate the receptacle; controlling the height of the exposed surface of the viscous material; providing at least one semiconductor element having a first surface and at least one other surface above the first surface; and placing the at least one semiconductor element against the at least one stop such that only a specific portion of the first surface the at least one semiconductor element contacts the exposed surface of the viscous material.” Applicant respectfully submits that Sakai fails to disclose, either expressly or inherently, “placing the at least one semiconductor element against the at least one stop such that only a specific portion of the first surface the at least one semiconductor element contacts the exposed surface of the viscous material”. Instead, Sakai discloses applying electrode paste to a plurality of surfaces of a plate-shaped electronic component.

As Sakai fails to disclose every element of the presently claimed invention, applicants submits that Sakai cannot anticipate claim 1. Therefore, claim 1 of the presently claimed invention is allowable.

Claims 2 through 11, 13 through 16, 43 and 44 are each allowable as depending, either directly or indirectly, from allowable claim 1.

Independent claim 48 of the presently claimed invention is allowable at least for the same reasons as allowable claim 1. By way of contrast with Sakai, claim 48 of the presently claimed invention recites a “method of applying viscous material to at least one semiconductor element, the method comprising: providing a receptacle including at least one viscous material pool containing viscous material having an exposed surface extending upwardly to a height therein,

the at least one viscous material pool including at least one outlet to present at least the exposed surface of the viscous material; providing at least one stop proximate the receptacle; extruding the viscous material through a coating stencil to reveal the exposed surface; providing at least one semiconductor element having a bottom surface and at least one other surface above the bottom surface and positioning the at least one semiconductor element proximate the at least one stop such that only a specific portion of the bottom surface of the at least one semiconductor element contacts the exposed surface of the viscous material.” Applicant respectfully submits that Sakai fails to disclose, either expressly or inherently, “positioning the at least one semiconductor element proximate the at least one stop such that only a specific portion of the bottom surface of the at least one semiconductor element contacts the exposed surface of the viscous material”. Instead, Sakai discloses applying electrode paste to a plurality of surfaces of a plate-shaped electronic component.

As Sakai fails to disclose every element of the presently claimed invention, applicants submits that Sakai cannot anticipate claim 48. Therefore, claim 48 of the presently claimed invention is allowable.

Claims 49 through 52, 54 through 58, 60 through 62, 85 and 86 are each allowable as depending, either directly or indirectly, from allowable claim 48.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 5,185,040 to Sakai et al. Taken with U.S. Patent No. 5,907,246 to Abraham et al.

Claims 12 and 59 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakai et al. (U.S. Patent No. 5,185,040) taken with Abraham et al. (U.S. Patent No. 5,907,246). Applicant respectfully traverses this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the

art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The Court of Appeals for the Federal Circuit has stated that “dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” *In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). See also MPEP § 2143.03. Having failed to teach or suggest each and every limitation of the current application, the prior art referenced as rendering dependent claims 12 and 59 obvious, cannot serve as a basis for rejection.

Obviousness Rejection Based on U.S. Patent No. 5,185,040 to Sakai et al. Taken with U.S. Patent No. 5,388,752 to Kawakatsu

Claims 42 and 84 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakai et al. (U.S. Patent No. 5,185,040) taken with Kawakatsu (U.S. Patent No. 5,388,752). Applicant respectfully traverses this rejection, as hereinafter set forth.

The Court of Appeals for the Federal Circuit has stated that “dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” *In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). See also MPEP § 2143.03. Having failed to teach or suggest each and every limitation of the current application, the prior art referenced as rendering dependent claims 42 and 84 obvious, cannot serve as a basis for rejection.

Obviousness Rejection Based on U.S. Patent No. 5,185,040 to Sakai et al. Taken with U.S. Patent No. 5,388,752 to Kawakatsu

Claims 6, 17, 53, and 63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakai et al. (U.S. Patent No. 5,185,040) taken with Kawakatsu (U.S. Patent No. 5,388,752). Applicant respectfully traverses this rejection, as hereinafter set forth.

The Court of Appeals for the Federal Circuit has stated that “dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” In re Fine, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). See also MPEP § 2143.03. Having failed to teach or suggest each and every limitation of the current application, the prior art referenced as rendering dependent claims 6, 17, 53 and 63 obvious, cannot serve as a basis for rejection.

Obviousness Rejection Based on U.S. Patent No. 5,185,040 to Sakai et al. Taken with U.S. Patent No. 4,690,999 to Numata et al.

Claims 19 and 65 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakai et al. (U.S. Patent No. 5,185,040) taken with Numata et al. (U.S. Patent No. 4,690,999). Applicant respectfully traverses this rejection, as hereinafter set forth.

The Court of Appeals for the Federal Circuit has stated that “dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” In re Fine, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). See also MPEP § 2143.03. Having failed to teach or suggest each and every limitation of the current application, the prior art referenced as rendering dependent claims 19 and 65 obvious, cannot serve as a basis for rejection.

Obviousness Rejection Based on U.S. Patent No. 5,185,040 to Sakai et al. Taken with U.S. Patent No. 5,747,102 to Smith et al.

Claims 18 and 65 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakai et al. (U.S. Patent No. 5,185,040) taken with Smith et al. (U.S. Patent No. 5,747,102). Applicant respectfully traverses this rejection, as hereinafter set forth.

The Court of Appeals for the Federal Circuit has stated that “dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” In re Fine, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). See also MPEP § 2143.03. Having failed to teach or suggest each and every limitation of the current application, the prior art

referenced as rendering dependent claims 18 and 65 obvious, cannot serve as a basis for rejection.

Obviousness Rejection Based on U.S. Patent No. 5,185,040 to Sakai et al. Taken with Japanese Patent No. JP 2-37964 to Fujita and U.S. Patent No. 5,105,661 to Sekita

Claims 25 through 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakai et al. (U.S. Patent No. 5,185,040) taken with Fujita (Japanese Patent No. JP 2-37964) and Sekita (U.S. Patent No. 5,105,661). Applicant respectfully traverses this rejection, as hereinafter set forth.

The Court of Appeals for the Federal Circuit has stated that “dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” In re Fine, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). See also MPEP § 2143.03. Having failed to teach or suggest each and every limitation of the current application, the prior art referenced as rendering dependent claims 25 through 30 obvious, cannot serve as a basis for rejection.

Obviousness Rejection Based on U.S. Patent No. 5,185,040 to Sakai et al. Taken with U.S. Patent No. 5,388,752 to Kawakatsu

Claims 42 and 84 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakai et al. (U.S. Patent No. 5,185,040) taken with Kawakatsu (U.S. Patent No. 5,388,752). Applicant respectfully traverses this rejection, as hereinafter set forth.

The Court of Appeals for the Federal Circuit has stated that “dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” In re Fine, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). See also MPEP § 2143.03. Having failed to teach or suggest each and every limitation of the current application, the prior art referenced as rendering dependent claims 42 and 84 obvious, cannot serve as a basis for rejection.

ENTRY OF AMENDMENTS

The amendments to the claims above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application.

CONCLUSION

Claims 1 through 19, 25 through 30, 42 through 44, 48 through 65, and 67 through 86 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



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